

# Reza Mahjourian

## EDUCATION

### UNIV. OF TEXAS AT AUSTIN

PHD IN COMPUTER SCIENCE

2018 | GPA: 4.0

### SHARIF UNIV. OF TECH.

BS IN COMPUTER ENG.

Tehran, Iran

## SKILLS

### A.I. RESEARCH

Robotics • Foundation Models •  
Computer Vision • Reinforcement  
Learning • Evolutionary Strategies

### SOFTWARE ENGINEERING

Programming:

Python • TensorFlow • C++

Databases:

PostgreSQL, PL/pgSQL

Linux:

Bash Scripting • Sed • AWK.

## OPEN SOURCE

Organized **Waymo Open Dataset**  
Occupancy and Flow Prediction Challenge

**CVPR 2022**, **CVPR 2024**, Scenario

Generation Challenge **CVPR 2025**

**GameGraph** [↗](#) : Studies impact of domain  
stochasticity and ergodicity on RL. **2011**

**Discovery** [↗](#) : Evolutionary feature  
discovery for RL. **2011**

**OpenNERO** [↗](#) : Platform for A.I. research  
and education. **2014**

**Master-Worker** : C++ [↗](#) Python [↗](#) :

Library for coordinating cluster workers  
through a shared file system. **2016**

**XPage** [↗](#) : Light-weight web framework,  
transforms high-level page specs in XML  
to server-side scripts using XSLT.

## EXPERIENCE

### WAYMO RESEARCH | STAFF RESEARCH SCIENTIST

Jul 2019 - present | Mountain View, CA

- Finetuned high-saliency Gemini models for self-driving tasks including detection and object semantics. Improved metrics by 5.8% (19.9% for peds).
- Led cross-functional collaborations with the Perception and Simulation teams landing models from the Research team in production.
- Visual trajectory prediction with VLMs **ECCV 2024**.
- Collaborated with DeepMind Robotics on high-speed robotics learning **RSS 2023**, achieving human-level competitive robot table tennis **ICRA 2025**, [Videos](#) [↗](#) using hierarchical and modular policies **PhD Dissertation**.
- Tech lead for scalable occupancy and trajectory prediction: StopNet **ICRA 2022**, patent, Occupancy Flow Fields **RA-L 2022**, patent, Modeling multi-agent interactions **ICRA 2021**, patent, used in **Waymo Open Motion Dataset**, Multi-agent scenario generation **ICRA 2024**, and BEV modeling for 3D Perception **WACV 2024**.
- Trained instance segmentation models with contrastive learning **IROS 2022** patent, and efficient semantic segmentation models. **ArXiv 2022**.

### GOOGLE BRAIN ROBOTICS | STUDENT RESEARCHER

Sep 2017 - Nov 2018 | Mountain View, CA

- Sample-efficient reinforcement learning of robot table tennis with self-play in a VR environment. **ArXiv 2018**, [Website](#) [↗](#). The hierarchical and modular policy design was adopted in a multi-year project leading to achieving human-level competitive robot table tennis **ICRA 2025**, [Videos](#) [↗](#).
- Unsupervised learning of object depth and motion from raw monocular videos. **AAAI 2019**, **CVPR 2019**, patent, [Website](#) [↗](#), [Google AI Blog](#) [↗](#).
- Future semantic segmentation using 3D structure, **ECCV 2018**, patent.
- Added computer vision library functions to **TensorFlow** [↗](#).

### GOOGLE BRAIN ROBOTICS | RESEARCH INTERN

May 2017 - Aug 2017 | Mountain View, CA

- Developed a novel self-supervised learning method for depth and ego-motion from monocular videos. **CVPR 2018**, [Website](#) [↗](#), patent, patent, patent.
- Developed custom TensorFlow op for aligning 3D point clouds during training.

### GOOGLE BRAIN | RESEARCH INTERN

May 2016 - Aug 2016 | Mountain View, CA

- Geometry-based next frame prediction from monocular video.
- IEEE Intelligent Vehicles Symposium 2017 [Paper](#) [↗](#), patent, patent.

### GOOGLE | SOFTWARE ENGINEERING INTERN

Jun 2015 - Aug 2015 | Mountain View, CA

- Created a sparse-feature deep learning model for Google's ad publishing platform using DistBelief. Improved performance by 1.38% over existing model.
- Added support for Capacitor files to DistBelief (now TensorFlow).

### TEAMUP [↗](#) | START-UP LEAD DEVELOPER

Jul 2009 - Dec 2009 | London, UK

- Created a Django web app for managing fitness and sports businesses.
- Led the project from inception to beta release [Website](#) [↗](#)

## **TELEMEDIA | SOFTWARE ENGINEER**

Sep 2004 - Dec 2005 | Paris, France

- Created a web app for a French network operator (KDDI) enabling customers to query their call data records.
- Created a PostgreSQL database pooling call detail records from telecom devices. Optimized the database and API for very fast queries.
- Developed a Python backend to process and fulfill mobile content orders placed via web services and via SMPP over the GPRS network.

## **VEESTA WORLD CO | SOFTWARE ENGINEER**

Sep 2003 - Sep 2004 | Tehran, Iran

- Implemented a SCADA communication protocol for an industrial RTU, running on the PSOS real-time OS. RTUs were deployed in a system monitoring the national power network.

## **SCIENCE AND ARTS FOUNDATION | SOFTWARE ENGINEER**

Aug 1999 - Aug 2003 | Tehran, Iran

- Led the technical operations of a non-profit organization based in Sharif University of Technology, donating computers and internet access to schools in underprivileged areas.
- Managed Linux servers for a network of about a 100 schools connected to Sharif University.
- Created a web portal offering educational content and services to teachers and students.
- Facilitated participation of teachers and students in international collaborative projects. Talks:
  - “The Experiences of iEARN in Iran”, Osaka, Japan, 2003
  - “Making a School Intranet Using Free and Open-Source Software”, Moscow, Russia, 2002
  - “The Activities of Science and Arts Foundation in Iran”, Cape Town, South Africa, 2001

## **KANOON INFORMATION SYSTEMS | START-UP CO-FOUNDER**

May 1997 - Sep 2002 | Tehran, Iran

- Created and maintained a web app for TakTaz Motors, enabling the sales office, remote factory, and distributed dealers to collaboratively manage inventory, wholesale orders, shipments, and registration documents.
- Led development of a database application for a major automaker (Kaveh Khodro) managing and tracking orders placed with parts suppliers, featuring comprehensive progress reports.
- Developed a multiple choice test evaluation package for educational institutions, offering reports on test taker performance and progress over time.

## **IDEH-NEGAR SOFTWARE | SOFTWARE DEVELOPER**

Dec 1995 - Apr 1997 | Tehran, Iran

- Programmed custom database applications for company clients.
- Created a customizable automated answering system serving customers over the phone.
- Programmed a library for visualizing metrics for a training a neural network doing OCR over Persian language text.